

Docket No.: ECKARDT-6
Appl. No.: 10/783,904

REMARKS

The last Office Action of May 6, 2005 has been carefully considered. Reconsideration of the instant application in view of the following remarks is respectfully requested.

Claims 1-12 are pending in the application. Claims 1, 3, and 4 have been amended. A new claim 13 has been added. No amendment to the specification has been made. No fee is due.

Allowance of claims 1 and 2, and the indicated allowability of claims 5-12, if rewritten in independent form to include the limitations of the base claim and all intervening claims, has been noted with appreciation.

Claim 1 has been amended to correct a typographical error. As clearly shown in FIGS. 2 through 5, the output (and not the input) of the control circuit is operatively connected to one of the half-bridges with its converter valves. Claim 3 has been amended to correct the same mistake, as discussed below.

Claim 13 now includes the subject matter of original claim 3 (with the correction of output, as noted above) and allowable claim 5 and should therefore be allowable.

Claims 3 and 4 stand rejected under 35 U.S.C. §103(a) as being unpatentable over German Patent DE 100 59 173 C1 to Schwesig in view of U.S. Pat. No. 5,717,258 to Park.

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REJECTION UNDER 35 U.S.C. §103(a)

Claim 3 has been amended to correct certain errors in the original claim and to recite more clearly the subject matter for which protection is sought.

Claim 3, as amended herein, recites a drive controller for a self-commutated converter with two half-bridges with converter valves. The drive controller includes two control circuits, whereby an output of one control circuit is operatively connected to one of the half-bridges, and the output of the other control circuit is operatively connected to the other half-bridge for triggering the respective converter valves. The inputs of the control circuits are connected in parallel. The circuit assembly has an output supplying a DC voltage to the inputs of the control circuits. Two switches are connected with their respective inputs to an external voltage and with their respective outputs to an input of the circuit assembly. Control units provide control signals to the switches so as to control the switches in a pulsed operating mode for maintaining the DC voltage at the inputs of the control circuits if one of the two switches is in an open position.

The subject matter recited in claim 3 relates to the circuit diagram shown in Fig. 4. Support for the amendments of claim 3 can be found in paragraphs [0029] to [0032] of the specification.

Schwesig discloses a drive controller implemented in safe technology. As described in paragraphs [0009] of the specification, Schwesig implements a switch S1 for interrupting the supply voltage SV1 for the opto-couplers OK1, OK3, OK5 for the upper bridge arm, which is derived from an external voltage

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SV, by applying a signal IL1 from the pulse inhibiting circuit I1. Another supply voltage SV2 for the opto-couplers OK2, OK4, OK6 for the lower bridge arm is interrupted by switch S2. More particularly, Schwesig discloses in paragraph [0028] of the German patent that the operability of the two pulse inhibiting paths with the switches S1 and S2 can be cyclically tested, for example, each time the supply voltage is switched on. Although Schwesig is interested in providing a "safe stop," which requires interruption of the supply voltage at both terminals, he appears to be satisfied that if one of the systems I1 or I2 fails, the other system can still react. However, Schwesig's circuit does not permit testing of even one of the switches without at least partially interrupting power to the load, for example, a 3-phase motor.

This problem is being solved by the drive controller of the invention, as recited in claim 3. The switches S1 and S2 are operated by pulsed control signals IL1 and IL2 which alternately open and close the switches S1 and S2, so as to maintain the DC voltage at the inputs of the control circuits if one of the two switches is in an open position. This is not possible with Schwesig's circuit, as discussed *supra*.

Park discloses pulsed operation of switches. However, the combination of Park and Schwesig would still not resolve the deficiencies of Schwesig. For at least these reasons, Applicants submit that claim 3, as amended herein, is patentable over the references of record. Claims 5-8 should then also be patentable for at least the reasons that claim 3 is patentable.

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Claims 4 and 9-12 now depend on allowable new claim 13 and should also be patentable for at least the reasons that claim 13 is patentable.

Withdrawal of the rejection under 35 U.S.C. §103(a) and allowance of claims 1-13 are thus respectfully requested.

CITED REFERENCES

Applicant has also carefully scrutinized the further cited prior art and finds it without any relevance to the newly submitted claims. It is thus felt that no specific discussion thereof is necessary.

CONCLUSION

In view of the above presented remarks and amendments, it is respectfully submitted that all claims on file should be considered patentably differentiated over the art and should be allowed.

Reconsideration and allowance of the present application are respectfully requested.

Should the Examiner consider necessary or desirable any formal changes anywhere in the specification, claims and/or drawing, then it is respectfully requested that such changes be made by Examiner's Amendment, if the Examiner feels this would facilitate passage of the case to issuance. If the

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Examiner feels that it might be helpful in advancing this case by calling the undersigned, applicant would greatly appreciate such a telephone interview.

Respectfully submitted,

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